WHAT IS CLAIMED IS:

1. A semiconductor device comprising:

a pixel TFT disposed in a pixel section; and

a driver circuit comprising a p-channel TFT and an n-channel TFT,

over a substrate,

wherein:

the p-channel TFT of the driver circuit comprises a channel forming region and a p-type impurity region of a fourth concentration that forms a source region or a drain region;

the n-channel TFT of the driver circuit comprises a channel forming region, an n-type impurity region of a first concentration which forms a LDD region that is disposed in contact with the channel forming region and partly overlaps a gate electrode, and an n-type impurity region of a third concentration which is disposed in the outside of the n-type impurity region of the first concentration and forms a source region or a drain region;

the pixel TFT comprises a channel forming region, an n-type impurity region of a second concentration which is disposed in contact with the channel forming region and forms a LDD region, and an n-type impurity region of the third concentration which is disposed in the outside of the n-type impurity region of the second concentration and forms a source region or a drain region and

a pixel electrode disposed in the pixel section has a light reflective surface, the pixel electrode is formed over an interlayer insulating film comprising an organic insulating material, and is connected to the pixel TFT through an opening formed in a protective insulating film comprising an inorganic insulating material disposed over a gate electrode of the pixel TFT and in the interlayer insulating film formed in contact

with the protective insulating film.

2. A semiconductor device comprising:

a pixel TFT disposed in a pixel section; and

a driver circuit comprising a p-channel TFT and an n-channel TFT,

over a substrate,

wherein:

the p-channel TFT of the driver circuit comprises a channel forming region and a p-type impurity region of a fourth concentration that forms a source region or a drain region;

the n-channel TFT of the driver circuit comprises a channel forming region, an n-type impurity region of a first concentration which forms a LDD region that is disposed in contact with the channel forming region and partly overlaps a gate electrode, and an n-type impurity region of a third concentration which is disposed in the outside of the n-type impurity region of the first concentration and forms a source region or a drain region;

the pixel TFT comprises a channel forming region, an n-type impurity region of a second concentration which is disposed in contact with the channel forming region and forms a LDD region, and an n-type impurity region of the third concentration which is disposed in the outside of the n-type impurity region of the second concentration and forms a source region or a drain region; and

a pixel electrode disposed in the pixel section has a light transmitting property, the pixel electrode is formed over an interlayer insulating film comprising an organic insulating material, and is connected to a conductive metal wiring connected to the pixel TFT through an opening formed in a protective insulating film comprising an inorganic insulating material disposed over a gate electrode of the pixel TFT and in the interlayer

insulating film formed in contact with the protective insulating film.

3. A semiconductor device having a liquid crystal sandwiched between a pair of substrates, wherein:

one of the substrates comprises a pixel TFT disposed in a pixel section and a p-channel TFT and an n-channel TFT of a driver circuit, wherein:

the p-channel TFT of the driver circuit comprises a channel forming region, a p-type impurity region of a fourth concentration which forms a source region or a drain region;

the n-channel TFT of the driver circuit comprises a channel forming region, an n-type impurity region of a first concentration which is disposed in contact with the channel forming region and forms a LDD region that partly overlaps a gate electrode and an n-type impurity region of a third concentration which is disposed on the outside of the n-type impurity region of the first concentration and forms a source region or a drain region;

the pixel TFT comprises a channel forming region, an n-type impurity region of a second concentration which is disposed in contact with the channel forming region and forms a LDD region and an n-type impurity of the third concentration which is disposed on the outside of the n-type impurity region of the second concentration and forms a source region or a drain region;

a pixel electrode disposed in the pixel section has a light reflective surface, the pixel electrode is formed over an interlayer insulating film comprising an organic insulating material and is connected to the pixel TFT through an opening formed in a protective insulating film comprising an inorganic insulating material disposed over a gate electrode of the pixel TFT and in the interlayer insulating film formed in contact with the protective insulating film; and

said one of the substrate is stuck to the other substrate on which a transparent conductive film is formed, through at least a columnar spacer formed on superposition of the opening.

4. A semiconductor device having a liquid crystal sandwiched between a pair of substrates, wherein:

one of the substrates comprises a pixel TFT disposed in a pixel section and a p-channel TFT and an n-channel TFT of a driver circuit, wherein:

the p-channel TFT of the driver circuit comprises a channel forming region, a p-type impurity region of a fourth concentration which forms a source region or a drain region;

the n-channel TFT of the driver circuit comprises a channel forming region, an n-type impurity region of a first concentration which is disposed in contact with the channel forming region and forms a LDD region that partly overlaps a gate electrode and an n-type impurity region of a third concentration which is disposed on the outside of the n-type impurity region of the first concentration and forms a source region or a drain region;

the pixel TFT comprises a channel forming region, an n-type impurity region of a second concentration which is disposed in contact with the channel forming region and forms a LDD region and an n-type impurity of the third concentration which is disposed on the outside of the n-type impurity region of the second concentration and forms a source region or a drain region;

a pixel electrode disposed in the pixel section has a light transmitting property, the pixel electrode is formed over an interlayer insulating film comprising an organic insulating material, and is connected to a conductive metal wiring connected to the pixel TFT through an opening formed in a protective insulating film comprising an inorganic

insulating material disposed over a gate electrode of the pixel TFT and in the interlayer insulating film formed in contact with the protective insulating film; and

said one of the substrate is stuck to the other substrate on which a transparent conductive film is formed, through at least a columnar spacer formed on superposition of the opening.

5. A semiconductor device according to claim 1 wherein the p-channel TFT of the driver circuit comprises a offset region between the channel forming region and the p-type impurity region of the fourth concentration which forms a source region or a drain region.

6. A semiconductor device according to claim 2 wherein the p-channel TFT of the driver circuit comprises a offset region between the channel forming region and the p-type impurity region of the fourth concentration which forms a source region or a drain region.

7. A semiconductor device according to claim 3 wherein the p-channel TFT of the driver circuit comprises a offset region between the channel forming region and the p-type impurity region of the fourth concentration which forms a source region or a drain region.

8. A semiconductor device according to claim 4 wherein the p-channel TFT of the driver circuit comprises a offset region between the channel forming region and the p-type impurity region of the fourth concentration which forms a source region or a drain region.

9. A semiconductor device according to claim 5 wherein the p-channel TFT of the driver circuit is used as an analog switch.

10. A semiconductor device according to claim 6 wherein the p-channel TFT of the driver circuit is used as an analog switch.

11. A semiconductor device according to claim 7 wherein the p-channel TFT of the driver circuit is used as an analog switch.

12. A semiconductor device according to claim 8 wherein the p-channel TFT of the driver circuit is used as an analog switch.

13. A semiconductor device according to claim 1 wherein gate electrodes of the pixel TFT and the p-cannel TFT and the n-channel TFT of the driver circuit comprise a heat resistant conductive material and a gate wiring extended from the driver circuit and connected to the gate electrodes comprises a low resistive conductive material.

14. A semiconductor device according to claim 2 wherein gate electrodes of the pixel TFT and the p-cannel TFT and the n-channel TFT of the driver circuit comprise a heat resistant conductive material and a gate wiring extended from the driver circuit and connected to the gate electrodes comprises a low resistive conductive material.

15. A semiconductor device according to claim 3 wherein gate electrodes of the pixel TFT and the p-cannel TFT and the n-channel TFT of the driver circuit comprise a heat resistant conductive material and a gate wiring extended from the driver circuit and connected to the gate electrodes comprises a low resistive conductive material.

16. A semiconductor device according to claim 4 wherein gate electrodes of the pixel TFT and the p-cannel TFT and the n-channel TFT of the driver circuit comprise a heat resistant conductive material and a gate wiring extended from the driver circuit and connected to the gate electrodes comprises a low resistive conductive material.

17. A semiconductor device according to claim 13 wherein the heat resistant material is an element selected from a group consisting of tantalum (Ta), titanium (Ti), molybdenum (Mo) and tungsten (W), a compound comprising the element, a compound combining the elements, a nitride comprising the element or a silicide

comprising the element.

18. A semiconductor device according to claim 14 wherein the heat resistant material is an element selected from a group consisting of tantalum (Ta), titanium (Ti), molybdenum (Mo) and tungsten (W), a compound comprising the element, a compound combining the elements, a nitride comprising the element or a silicide comprising the element.

19. A semiconductor device according to claim 15 wherein the heat resistant material is an element selected from a group consisting of tantalum (Ta), titanium (Ti), molybdenum (Mo) and tungsten (W), a compound comprising the element, a compound combining the elements, a nitride comprising the element or a silicide comprising the element.

20. A semiconductor device according to claim 16 wherein the heat resistant material is an element selected from a group consisting of tantalum (Ta), titanium (Ti), molybdenum (Mo) and tungsten (W), a compound comprising the element, a compound combining the elements, a nitride comprising the element or a silicide comprising the element.

21. A semiconductor device according to claim 3 wherein the columnar spacer is formed over the p-channel TFT and the n-channel TFT of the driver circuit.

22. A semiconductor device according to claim 4 wherein the columnar spacer is formed over the p-channel TFT and the n-channel TFT of the driver circuit.

23. A semiconductor device according to claim 3 wherein the columnar spacer is formed to cover at least a source wiring or a drain wiring of the p-channel TFT and the n-channel TFT of the driver circuit.

24. A semiconductor device according to claim 4 wherein the columnar spacer is formed to cover at least a source wiring or a drain wiring of the p-channel TFT and the

n-channel TFT of the driver circuit.

25. A semiconductor device according to claim 1 wherein the semiconductor device is selected from a group consisting of a personal computer, a video camera, a portable information terminal, a digital camera, a digital video disc player, an electronic game machine and a projector.

26. A semiconductor device according to claim 2 wherein the semiconductor device is selected from a group consisting of a personal computer, a video camera, a portable information terminal, a digital camera, a digital video disc player, an electronic game machine and a projector.

27. A semiconductor device according to claim 3 wherein the semiconductor device is selected from a group consisting of a personal computer, a video camera, a portable information terminal, a digital camera, a digital video disc player, an electronic game machine and a projector.

28. A semiconductor device according to claim 4 wherein the semiconductor device is selected from a group consisting of a personal computer, a video camera, a portable information terminal, a digital camera, a digital video disc player, an electronic game machine and a projector.

29. A method for forming a semiconductor device comprising a pixel TFT of a pixel section and a driver circuit comprising a p-channel TFT and an n-channel TFT disposed in the periphery of the pixel section over a substrate, comprising the steps of:

forming a base film in contact with the substrate;

forming a plurality of island semiconductor layers over the base film;

forming an n-type impurity region of a first concentration in selected regions of the island semiconductor layers, which form at least a LDD region that partly overlaps a gate electrode of the n-channel TFT of the driver circuit;

forming an n-type impurity region of a second concentration in selected regions of the island semiconductor layers, which form at least a LDD region of the pixel TFT;

forming an n-type impurity region of a third concentration in selected regions of the island semiconductor layers, which form at least a source region or a drain region in the n-channel TFT of the driver circuit and the pixel TFT;

forming a p-type impurity region of a fourth concentration in selected regions of the island semiconductor layers, which form at least a source region or a drain region of the p-channel TFT of the driver circuit;

forming a protective insulating film comprising an inorganic insulating material over gate electrodes of: the pixel TFT; and the n-channel TFT and the p-channel TFT of the driver circuit;

forming an interlayer insulating film comprising an organic insulating material in contact with the protective insulating film; and

forming a pixel electrode having a light reflecting surface over the interlayer insulating film, which pixel electrode is connected to the pixel TFT.

30. A method for forming a semiconductor device comprising a pixel TFT of a pixel section and a driver circuit comprising a p-channel TFT and an n-channel TFT disposed in the periphery of the pixel section over a substrate, comprising the steps of:

forming a base film over the substrate;

forming a plurality of island semiconductor layers over the base film;

forming an n-type impurity region of a first concentration in selected regions of the island semiconductor layers, which form at least a LDD region that partly overlaps a gate electrode of the n-channel TFT of the driver circuit;

forming an n-type impurity region of a second concentration in selected regions of the island semiconductor layers, which form at least a LDD region of the pixel TFT;

forming an n-type impurity region of a third concentration in selected regions of the island semiconductor layers, which form at least a source region or a drain region in the n-channel TFT of the driver circuit and the pixel TFT;

forming a p-type impurity region of a fourth concentration in selected regions of the island semiconductor layers, which form at least a source region or a drain region of the p-channel TFT of the driver circuit;

forming a protective insulating film comprising an inorganic insulating material over gate electrodes of: the pixel TFT; and the n-channel TFT and the p-channel TFT of the driver circuit;

forming an interlayer insulating film comprising an organic insulating material in contact with the protective insulating film;

forming a conductive metal wiring that is connected to the pixel TFT; and

forming a pixel electrode comprising a transparent conductive film that is connected to the conductive metal wiring, over the interlayer insulating film.

31. A method for forming a semiconductor device which holds liquid between a pair of substrates,

wherein the manufacturing method for one of the substrates which comprises a pixel TFT disposed in a pixel section and a p-channel TFT and an n-channel TFT of a driver circuit comprises the steps of:

forming a base film over the substrate;

forming a plurality of island semiconductor layers over the base film;

forming an n-type impurity region of a first concentration in selected regions of the island semiconductor layers, which form at least a LDD region that partly overlaps a gate electrode of the n-channel TFT of the driver circuit;

forming an n-type impurity region of a second concentration in selected regions

of the island semiconductor layers, which form at least a LDD region of the pixel TFT;

forming an n-type impurity region of a third concentration in selected regions of the island semiconductor layers, which form at least a source region or a drain region in the n-channel TFT of the driver circuit and the pixel TFT;

forming a p-type impurity region of a fourth concentration in selected regions of the island semiconductor layers, which form at least a source region or a drain region of the p-channel TFT of the driver circuit;

forming a protective insulating film comprising an inorganic insulating material over gate electrodes of: the pixel TFT; and the n-channel TFT and the p-channel TFT of the driver circuit;

forming an interlayer insulating film comprising an organic insulating material in contact with the protective insulating film; and

forming a pixel electrode having a light reflecting surface over the interlayer insulating film, which is connected to the pixel TFT through an opening disposed in the interlayer insulating film and the protective insulating film,

wherein a manufacturing method for the other substrate comprises at least a step of forming a transparent conductive film, and

said one of the substrates and the other substrate are stuck together through at least a columnar spacer formed in superposition of the opening.

32. A method for forming a semiconductor device which holds liquid between a pair of substrates,

wherein the manufacturing method for one of the substrates which comprises a pixel TFT disposed in a pixel section and a p-channel TFT and an n-channel TFT of a driver circuit comprises the steps of:

forming a base film over the substrate;

forming a plurality of island semiconductor layers over the base film;

forming an n-type impurity region of a first concentration in selected regions of the island semiconductor layers, which form at least a LDD region that partly overlaps a gate electrode of the n-channel TFT of the driver circuit;

forming an n-type impurity region of a second concentration in selected regions of the island semiconductor layers, which form at least a LDD region of the pixel TFT;

forming an n-type impurity region of a third concentration in selected regions of the island semiconductor layers, which form at least a source region or a drain region in the n-channel TFT of the driver circuit and the pixel TFT;

forming a p-type impurity region of a fourth concentration in selected regions of the island semiconductor layers, which form at least a source region or a drain region of the p-channel TFT of the driver circuit;

forming a protective insulating film comprising an inorganic insulating material over gate electrodes of: the pixel TFT; and the n-channel TFT and the p-channel TFT of the driver circuit;

forming an interlayer insulating film comprising an organic insulating material in contact with the protective insulating film;

forming a conductive metal wiring which is connected to the pixel TFT through an opening disposed in the interlayer insulating film and the protective insulating film; and

forming a pixel electrode comprising a transparent conductive film over the interlayer insulating film, which is connected to the metal wiring,

wherein a manufacturing method for the other substrate comprises at least a step of forming a transparent conductive film, and

said one of the substrates and the other substrate are stuck together through at

least a columnar spacer formed in superposition of the opening.

33. A method for forming a semiconductor device according to claim 29 wherein the step of forming the p-type impurity region of the fourth concentration in selected regions of the island semiconductor layers which form at least a source region or a drain region of the p-channel TFT, is performed after the step of forming a protective insulating film comprising an inorganic insulating material over a gate electrode of the pixel TFT, thereby forming an offset region between the channel forming region and the p-type impurity region of the fourth concentration which forms a source region or a drain region.

34. A method for forming a semiconductor device according to claim 30 wherein the step of forming the p-type impurity region of the fourth concentration in selected regions of the island semiconductor layers which form at least a source region or a drain region of the p-channel TFT, is performed after the step of forming a protective insulating film comprising an inorganic insulating material over a gate electrode of the pixel TFT, thereby forming an offset region between the channel forming region and the p-type impurity region of the fourth concentration which forms a source region or a drain region.

35. A method for forming a semiconductor device according to claim 31 wherein the step of forming the p-type impurity region of the fourth concentration in selected regions of the island semiconductor layers which form at least a source region or a drain region of the p-channel TFT, is performed after the step of forming a protective insulating film comprising an inorganic insulating material over a gate electrode of the pixel TFT, thereby forming an offset region between the channel forming region and the p-type impurity region of the fourth concentration which forms a source region or a drain region.

36. A method for forming a semiconductor device according to claim 32 wherein the step of forming the p-type impurity region of the fourth concentration in selected regions of the island semiconductor layers which form at least a source region or a drain region of the p-channel TFT, is performed after the step of forming a protective insulating film comprising an inorganic insulating material over a gate electrode of the pixel TFT, thereby forming an offset region between the channel forming region and the p-type impurity region of the fourth concentration which forms a source region or a drain region.

37. A method for manufacturing a semiconductor device according to claim 29 further comprising the steps of:

forming gate electrodes of the pixel TFT of the pixel section, and of the p-channel TFT and the n-channel TFT disposed in the periphery of the pixel section, from a heat resistant conductive material; and

forming a gate wiring that is extended from the driver circuit and is connected to the gate electrodes from a low resistive conductive material.

38. A method for manufacturing a semiconductor device according to claim 30 further comprising the steps of:

forming gate electrodes of the pixel TFT of the pixel section, and of the p-channel TFT and the n-channel TFT disposed in the periphery of the pixel section, from a heat resistant conductive material; and

forming a gate wiring that is extended from the driver circuit and is connected to the gate electrodes from a low resistive conductive material.

39. A method for manufacturing a semiconductor device according to claim 31 further comprising the steps of:

forming gate electrodes of the pixel TFT of the pixel section, and of the

p-channel TFT and the n-channel TFT disposed in the periphery of the pixel section, from a heat resistant conductive material; and

forming a gate wiring that is extended from the driver circuit and is connected to the gate electrodes from a low resistive conductive material.

40. A method for manufacturing a semiconductor device according to claim 32 further comprising the steps of:

forming gate electrodes of the pixel TFT of the pixel section, and of the p-channel TFT and the n-channel TFT disposed in the periphery of the pixel section, from a heat resistant conductive material; and

forming a gate wiring that is extended from the driver circuit and is connected to the gate electrodes from a low resistive conductive material.

41. A method for manufacturing a semiconductor device according to claim 37 wherein the heat resistant conductive material is formed from an element selected from among a group consisting of tantalum (Ta), titanium (Ti), molybdenum (Mo) and tungsten (W), a compound comprising the element, a compound combining the elements, a nitride which comprising the element or a silicide comprising the element.

42. A method for manufacturing a semiconductor device according to claim 38 wherein the heat resistant conductive material is formed from an element selected from among a group consisting of tantalum (Ta), titanium (Ti), molybdenum (Mo) and tungsten (W), a compound comprising the element, a compound combining the elements, a nitride which comprising the element or a silicide comprising the element.

43. A method for manufacturing a semiconductor device according to claim 39 wherein the heat resistant conductive material is formed from an element selected from among a group consisting of tantalum (Ta), titanium (Ti), molybdenum (Mo) and tungsten (W), a compound comprising the element, a compound combining the

elements, a nitride which comprising the element or a silicide comprising the element.

44. A method for manufacturing a semiconductor device according to claim 40 wherein the heat resistant conductive material is formed from an element selected from among a group consisting of tantalum (Ta), titanium (Ti), molybdenum (Mo) and tungsten (W), a compound comprising the element, a compound combining the elements, a nitride which comprising the element or a silicide comprising the element.

45. A method for manufacturing a semiconductor device according to claim 31 wherein the columnar spacer is further formed over the p-channel TFT and the n-channel TFT of the driver circuit.

46. A method for manufacturing a semiconductor device according to claim 32 wherein the columnar spacer is further formed over the p-channel TFT and the n-channel TFT of the driver circuit.

47. A method for manufacturing a semiconductor device according to claim 31 wherein the columnar spacer is formed so as to cover at least a source wiring or a drain wiring of the p-channel TFT and the n-channel TFT of the driver circuit.

48. A method for manufacturing a semiconductor device according to claim 32 wherein the columnar spacer is formed so as to cover at least a source wiring or a drain wiring of the p-channel TFT and the n-channel TFT of the driver circuit.

49. A method for manufacturing a semiconductor device according to claim 29 wherein the semiconductor device is one selected from a group consisting of a personal computer, a video camera, a portable information terminal, a digital camera, a digital video disc player, an electronic game machine and a projector.

50. A method for manufacturing a semiconductor device according to claim 30 wherein the semiconductor device is one selected from a group consisting of a personal computer, a video camera, a portable information terminal, a digital camera, a digital

video disc player, an electronic game machine and a projector.

51. A method for manufacturing a semiconductor device according to claim 31 wherein the semiconductor device is one selected from a group consisting of a personal computer, a video camera, a portable information terminal, a digital camera, a digital video disc player, an electronic game machine and a projector.

52. A method for manufacturing a semiconductor device according to claim 32 wherein the semiconductor device is one selected from a group consisting of a personal computer, a video camera, a portable information terminal, a digital camera, a digital video disc player, an electronic game machine and a projector.